

## CLIMATOLOGICAL DATA FOR APRIL, 1913.

## DISTRICT NO. 3, OHIO VALLEY.

PROF. FERDINAND J. WALZ, District Editor.

## GENERAL SUMMARY.

Weather conditions during April, 1913, on the whole were uneventful, the most prominent features being the sharp variations in temperature and the light rainfall over the larger portion of the district. The weather was generally favorable for all outdoor work, and while the spring growing season was rather backward, vegetation having made but slight growth, especially over the central and northern portions of the district, up to the middle of the month, yet the rains and warm weather of the last two weeks were extremely favorable, and by the end of the month vegetation had made decided progress. Frosts and freezing temperatures occurred at numerous times during the month, the periods of severest weather being about the 5th-8th, 20th-21st, and at the end of the month. There was comparatively little damage done, however, except during the second of these periods, when a large percentage of fruit buds, especially peaches, were reported killed in eastern and southern Ohio, and fruit was killed or damaged in the northern counties of western North Carolina.

There was a large percentage of clear days, and sunshine was abundant over most of the district.

The floods of the last part of March and early April caused considerable loss of oats and clover seed in the lowlands of Ohio and Indiana where they had just been sown, but reports state that there was little damage to the winter wheat crop of those States.

The rainfall, while generally light for April, was well distributed through the month and on that account made up somewhat for the deficiency in amount. The soil was generally reported in good condition despite the extraordinary wet weather of the latter part of March.

High-pressure areas largely dominated the weather conditions of the month. But two shallow depressions and no well-defined cyclonic storms passed across the Ohio Valley during the entire month. The stronger disturbances that approached drew up the Mississippi Valley and passed eastward far to the north.

The following table summarizes the chief features of meteorological interest for the several sections of the district:

Portions of States included in the Ohio River Basin.	Temperature.				Precipitation.							
	Average.	Departure.	Highest.	Lowest.	Average.	Departure.	Greatest monthly.	Least monthly.	Greatest in 24 hours.	Average number of days.	Average snow-fall.	
New York.....	47.2	+3.6	87	17	4.60	+1.59	5.67	3.77	1.90	12	1.7	
Pennsylvania.....	49.7	+1.5	89	17	2.78	-0.62	4.17	2.05	1.18	11	0.2	
Maryland.....	46.6	+1.2	83	11	2.98	-0.72	3.06	2.86	0.83	11	0.3	
West Virginia.....	52.5	+0.6	92	16	2.99	-0.89	5.48	1.61	2.25	10	T.	
Ohio.....	50.7	+0.5	90	18	3.51	+0.38	5.50	1.87	2.33	11	T.	
Indiana.....	52.4	+0.1	89	20	3.56	+0.13	5.73	1.79	2.78	11	T.	
Illinois.....	53.7	-0.1	90	27	2.91	-0.79	3.90	2.12	1.32	9	T.	
Kentucky.....	55.3	+0.3	89	27	2.73	-1.23	4.32	1.18	1.45	10	T.	
Tennessee.....	57.7	+0.1	90	23	2.53	-1.83	5.53	1.14	2.03	8	T.	
Alabama.....	59.3	-1.2	87	31	2.10	-2.20	3.13	1.58	1.47	7	0	
Georgia.....	55.9	-0.6	87	34	0.58	.....	.....	.....	0.20	6	T.	
North Carolina.....	51.9	-0.6	84	21	3.10	-1.91	6.32	0.72	3.85	8	1.0	
Virginia.....	51.0	-0.2	86	20	2.75	-0.77	3.64	1.68	1.80	9	0.2	

## TEMPERATURE.

The temperature averaged from 1.5° to 3.5° above normal over western Pennsylvania and extreme western New York, and from 1° to 1.5° below normal over the northern portions of Alabama and Georgia. Elsewhere the daily temperature average differed less than 1° from the April normal. Unseasonably warm weather, which had overspread the district on the last two days of March, continued through the first three or four days of April, but a change to colder set in on the 5th and continued, with but a slight interruption about the 10th, until the 15th. From the 5th to the 8th, inclusive, minimum temperatures were unseasonably low for the season in all parts of the district and were largely below freezing. They ranged as low as 11° to 16° in western Maryland, between 19° and 35° over West Virginia, western Pennsylvania, and sections north of the Ohio River, and between 28° and 38° over Kentucky, Tennessee, western North Carolina, and southwestern Virginia.

Minimum temperatures were again unseasonably low in the period 13th-15th, when they ranged generally between 30° and 40°. However, the most harmful cold weather is reported to have occurred on the 20th and 21st, when, after two days of very warm weather, with day temperatures registering between 70° and 90°, a sharp cold wave overspread the district and brought freezing temperatures practically into all sections, the temperature falling as low as 16° and 18° in West Virginia, Ohio, and western Pennsylvania; 20° to 25° in North Carolina and southwestern Virginia, and 25° to 35° over the remainder of the district. After the 21st the temperature increased rapidly, and from the 22d to the 25th, inclusive, day temperatures were again high, the maxima ranging between 78° and 92°. Another cool wave, however, overspread the Ohio Valley from the 27th to the end of the month, when frosts and temperatures near freezing or below were reported from much of the district, but especially from the southern and eastern sections.

## PRECIPITATION.

The total precipitation was considerably above normal over southwestern New York, slightly above over Ohio and Indiana, but below normal in all other sections of the district, the greatest deficiency being over the more southerly sections. Excessive 24-hour rainfalls were reported from only three places, namely, Shoals, Ind., on the 4th, and Blowing Rock and Highlands, N. C., on the 11th.

Between 4 and 6 inches of rain fell over extreme western Tennessee, over the White River Basin of Indiana, over western Ohio, southwestern New York, a small area in central West Virginia, and at a few scattered stations in other sections. The amount was less than 2 inches over a considerable area in the western portions of Kentucky and Tennessee and over the upper half of the Tennessee River Basin, and less than 1 inch over a small area in southwestern North Carolina and northern Alabama. Over practically all the remainder of the dis-

trict the monthly amounts ranged between 2 and 4 inches. Rainfall was quite well distributed through the month. The more important precipitation periods, however, were the 3d-5th, 10th-14th, and the 25th-29th.

Snow in appreciable amount fell only in the extreme northeastern portion of the district and at a few of the more elevated stations in the Appalachian section. The greatest amounts were 2.5 inches at Bolivar, N. Y., 3 inches at Warren, Pa., and 5 inches at Banners Elk and 6 inches at Highlands, N. C.

#### MISCELLANEOUS.

Thunderstorms occurred quite generally on the 2d over Pennsylvania, West Virginia, Ohio, Indiana, and Illinois; on the 3d in Indiana, Illinois, and Kentucky; on the 4th over Indiana, Illinois, Kentucky, Tennessee, and Alabama; over Kentucky and Tennessee on the 9th and 10th; over West Virginia on the 14th and 15th, and over all the district as far south as Tennessee on the 18th and 19th and again on the 26th and 27th. The following losses from lightning were reported: In Illinois, at Hume, a barn and contents, including 8 horses and 2 cows, were destroyed; at Westfield a barn and contents were destroyed, and at Rossville 2 cows were killed. In Grant County, Ky., several barns were struck by lightning and destroyed on the 20th. In Lawrence County, Ind., during the night of the 18th-19th, a barn was struck by lightning and 1 horse killed; also about the same time another barn was struck, 5 horses killed, and the structure with all its contents destroyed.

#### MARCH—APRIL, 1913, FLOODS IN THE OHIO VALLEY.

From March 23 to 27, inclusive, unusually heavy rains fell over practically all the Ohio River Basin. They were phenomenally heavy over the northern watershed, and especially over the drainage areas of the tributaries in Ohio, Indiana, and eastern Illinois. A detailed account of this rainfall was published in the March number of the Monthly Weather Review, and a complete story of the flood in all its features will be given in a special bulletin of the Weather Bureau.

In accounting for the unprecedented, almost inconceivable, devastation wrought by the rivers in Ohio and Indiana, much stress must be laid not only on the fact that the rainfall was phenomenally great, 6 to 12 inches, over all the drainage areas of those rivers, greater probably than ever before recorded in those sections in the same length of time, and that the greatest precipitation occurred over the headwaters of those rivers, but also on the fact that the excessive rains began earlier at the headwaters and progressed down the streams. Thus the rush of flood waters from the sources of the streams was constantly and rapidly being added to as it passed down, resulting in a tremendous cumulative flood wave and accelerated current, gathering and carrying in its onrush an enormous amount of drift, augmenting the destructive forces.

The precipitation which caused the floods in January last was much heavier over the southern than over the northern watershed, also the line of advance of the precipitation areas was in the usual direction, namely, southwest to northeast. Hence only over the lower Tennessee and over the Cumberland and Green River Basins did the excessive rains progress downstream and cause an accumulative flood wave in those rivers similar in some degree to that of March in the rivers of Indiana and Ohio.

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October 3 to 6, 1910, excessive rains fell in the lower Ohio Valley and over much of the drainage areas of the northern tributaries of the river as far east as the upper basin of the Scioto in northern Ohio. Over much of the drainage areas of the Wabash, Great Miami, and Scioto Rivers the aggregate rainfall for the 4-day period ranged from 6 to 10 inches, and is therefore fairly commensurate and comparable with the rains which fell over those sections March 23d-27th last. It is true that the rainfall was considerably larger over the headwaters of those rivers in March, 1913, than in October, 1910, and also that the October rains fell on comparatively dry ground, while the March rains fell on ground well saturated. Yet the difference in the amount of rainfall and the condition of the ground are not sufficient in themselves to account for the incomparable difference in the damage done by the flood waters of October, 1910, and those of March, 1913. In October, 1910, the rain area advanced from southwest to northeast and there was no cumulative flood wave in the northern streams. The water reached a stage of 13.7 feet at Columbus, Ohio, October 7, 1910, and 22.9 feet March 25, 1913.

The northern tributaries of the Ohio, from the Wabash to the Beaver, were all higher in the recent flood than in any flood of previous record. The Allegheny River at only a few places exceeded the highest stage known. None of the southern tributaries exceeded previous records of high water, except where stages were due to backwater.

The main stream did not reach stages above previous records at points above New Martinsville, W. Va. At Wheeling, W. Va., the crest stage was 2 feet below the 1884 record. From New Martinsville, W. Va., to Chilo, Ohio, about 30 miles above Cincinnati, the flood stages exceeded the record stages of 1884. This excess was greatest at Marietta, 5.7 feet. It was 5 feet at Parkersburg and gradually decreased toward Chilo. At Cincinnati the stage was 1.3 feet below the 1884 stage, the 1884 stage being materially affected by water from the Licking River. At Madison, Ind., the stage was 1 foot above the 1884 stage, probably due to the combined flood wave from the Great Miami and Kentucky Rivers. At Louisville the crest was 1.8 feet below the 1884 stage. From Hawesville, Ky., to Paducah, Ky., the flood crest ranged from 0.1 foot to 3.1 feet above the 1884 stage. At Cairo, Ill., the crest was the highest known, being 0.9 foot above the crest of April, 1912, and 2.6 feet above the crest of February, 1883. The water was higher at Cairo in 1883 than in 1884.

*Northern tributaries.*—The water in the Allegheny River was at some places above the high stage of 1865 and at others it closely approached that stage. The flood in the Beaver River exceeded by from 5 to 7 feet all previous records for that stream. The Chenango River was 3 feet higher than ever before known. The Muskingum, at Zanesville, reached a crest stage of 51.8 feet, or 15 feet higher than ever before known.

*Every stream in the State of Ohio, except the Hocking River and the small creeks in the southeastern counties, was higher than ever before known.* The Scioto, at Columbus, Ohio, reached a crest of 22.9 feet, which is 1.6 feet above the flood mark of March, 1898, the highest water recorded previously. The flood crest of the Great Miami was 7.7 feet higher at Dayton, and 13.6 feet higher at Hamilton, Ohio, than any previous high-water mark. At Tiffin, Ohio, on the Sandusky, the water was 8 feet higher, and at Delaware, on the Olentangy, 15.7 feet higher than any previous record. The flood in the White River reached a crest of 25.7 feet at Indianapolis, which

is 4.4 feet above the flood of March, 1904, the highest previous record.

The flood in the Wabash River reached a crest of 33.4 feet at Attica and 31.3 feet at Terre Haute, the highest water ever known at either place. At Mount Carmel, Ill., a crest of 31 feet was reached in the Wabash River, which is 3 feet above any previous record. Records of water stages in the Big Vermillion River, kept by one family for 100 years, show that the stage March 26, 1913, was the highest in all the record.

*Southern tributaries.*—The Monongahela was at no time above flood stage. The Great Kanawha, the Big Sandy, and the Licking Rivers were all considerably above flood stage, but within the records of previous years. The Kentucky River reached a flood crest of 39.9 feet at

Beattyville, 34.6 feet at High Bridge, and 38.3 feet at Frankfort. These stages are 7.9 feet, 1.6 feet, and 4.5 feet, respectively, above the flood crest reached in January last. At Frankfort the Kentucky River reached a stage of 42 feet in February, 1884, and 44.5 in February, 1878. The Green River was much above flood stage, but not as high as in January last. In the Cumberland River the flood was much more severe in the upper than in the middle and lower sections. At Burnside, Ky., where the Cumberland rose 42 feet in 24 hours, a flood crest of 61.5 feet was reached, the same as in January, 1913. At all other stations on the Cumberland the flood crest was below that of January. In the Tennessee River flood stages were barely reached at any point above where stages were affected by backwater from the Ohio.

TABLE 1.—Climatological data for April, 1913. District No. 3, Ohio Valley.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.	Prevailing wind direction.	Observers.				
				Mean.	Departure from the normal.			Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.			Greatest in 24 hours.	Total snowfall unmeted.	Number of rainy days.			
					Date.	Lowest.	Greatest daily range.							Total.	Greatest in 24 hours.	Total snowfall unmeted.	Number of rainy days.					
<i>New York.</i>																						
Allegany.	Cattaraugus.	1,441	7	47.3	+ 3.6	83	24†	20	21	46	5.67	+ 1.59	1.90	1.5	16	13	8	9	nw.	Charles E. Whitney.		
Baldwin.	Allegany.	1,800	19	47.1	+ 3.6	87	26	17	21	47	4.36	+ 1.59	1.72	2.5	8	13	10	7	sw.	Charles F. Hoffman.		
Olean.	Cattaraugus.	1,402	5								3.77		1.40	1.0	11				w.	John W. Alles.		
<i>Pennsylvania.</i>																						
Aleppo.	Green.	1,135	12	50.6	+ 1.4	86	25	20	21	43	2.05	- 1.76	0.87	T.	9	14	8	8	nw.	J. S. Hinerman.		
Baldwin.	Butler.	1,404	7	48.3		83	25†	22	21	43	2.22		0.76	T.	7	11	9	10	w.	S. H. Templeton.		
Beaver Dam.	Beaver.	674	19										0.26	- 0.71	0.53	0	14	12	4	ne.	U. S. Engineer.	
Brookville.	Jefferson.	1,173	22	50.0*		87	25	17	8	51†	2.90	- 0.24	1.00	0	0				w.	H. C. Bartholomew.		
California.	Washington.	770		53.0		87	25	24	8	47	3.13		0.88	0	10	10	8	12	w.	Prof. B. U. P. Cobough.		
Clarion.	Clarion.	1,073	28										0.70	1.0	1.11	16	1	13	w.	P. O. Miller.		
Claysville.	Washington.	1,127	9	51.4		87	25†	19	21	45	3.28		0.95	0	13	14	7	9	w.	E. T. Buchanan.		
Confluence.	Somerset.	1,352	29										0.20	0.60	0	10	8	14		Grant Pyle.		
Franklin.	Venango.	955	39	49.2	+ 3.0	84	25	23	8†	43	2.65	- 0.06	0.59	0.2	12	12	6	12	nw.	F. E. Dixon.		
Freeport.	Armstrong.	772	40										0.63	0.63	0.69	11	13	1	16		Mrs. Anna R. Burtner.	
Greensboro.	Green.	768	24										0.64	- 0.78	0.52	0	13	11	1	s.v.	James G. Cramer.	
Greenville.	Mercer.	950	17	47.9	+ 2.1	85	24	20	8†	49	2.10	- 0.87	0.63	T.	11	17	5	8	nw.	A. M. Orr.		
Indiana.	Indiana.	1,350	16	51.2	+ 1.6	88	25†	19	8	48	2.52	- 1.75	0.65	0	10	16	7	7		R. W. Wehrle.		
Johnstown.	Cambria.	1,184	25	51.0	+ 1.5	88	25†	24	8	48	2.44	- 1.37	0.72	T.	15	8	9	13	nw.	E. C. Lorentz.		
Lock No. 4.	Washington.	718	27										0.08	- 0.12	0.96	0	11	12	6	12	sw.	R. T. McGowan.
Lycippus.	Westmoreland.	1,420	21	50.6	+ 1.2	81	25	24	8	33	3.16	- 0.66	0.70	0	11					Murray Forbes.		
Mosgrove.	Armstrong.	775	2										0.72		0.97	0.1	13	14	0	16	s.v.	C. J. Moore.
Pittsburgh.	Allegheny.	842	43	51.6	+ 0.6	84	25	29	8	33	2.53	- 0.37	0.68	T.	11	12	6	12	nw.	U. S. Weather Bureau.		
Ridgway.	Elk.	0	49.6			87	25	18	21	48	2.72		1.13	0.3	12					F. J. Eagen.		
Saegerstown.	Crawford.	1,116	22	46.7	+ 1.7	85	25	19	8†	48	3.21	+ 0.12	0.80	T.	14	4	16	10	nw.	J. G. Apple.		
Sharon.	Mercer.	940	24	49.8		83	25	23	21	41	2.09		0.44	T.	10	12	0	18	s.w.	Norman S. Powell.		
Somerset.	Somerset.	2,250	57	47.6	+ 1.5	84	25†	17	8	48	3.05	- 1.42	0.52	T.	9	12	6	12	nw.	W. M. Schrock.		
Uniontown.	Fayette.	999	25	50.0	- 0.6	83	25	25	8†	45	3.05	- 0.63	0.80	T.	12					William Hunt.		
Warren.	Warren.	1,137	24	47.0	+ 2.6	89	25	18	21	50	4.17	+ 1.03	1.15	3.0	11	14	0	16	s.w.	Anna Simpson.		
<i>Maryland.</i>																						
Deer Park.	Garrett.	2,457	20	46.5	+ 1.7	82	24	11	8	53	3.06	- 0.55	0.60	0	12					S. P. Specht.		
Grantsville.	do.	2,351	20	46.9	+ 1.3	83	24	16	8	44	3.02	- 0.38	0.83	0	9					J. S. Miller.		
Oakland.	do.	2,461	14	46.4	+ 0.7	82	25	14	8	50	2.86	- 1.22	0.62	0.9	13	12	10	8	w.	R. E. Weber.		
<i>West Virginia.</i>																						
Bancroft.	Putnam.	574	10	55.2	+ 1.7	90	23†	28	7	48	2.75	- 1.33	0.55	T.	0	9	13	3	14	ne.	R. E. Dent.	
Beckley.	Releigh.	2,440	14	49.4	+ 0.5	81	25	21	21	46	2.54	- 1.46	0.98	T.	4	19	2	9	1	w.	John A. Ewart.	
Bens Run.	Pleasants.	622	14	54.2	+ 2.5	87	25	26	S	42	2.82	- 1.69	0.86	0	10	20	3	7		J. D. Riggs.		
Bluefield.	Mercer.	2,563	19	53.8	+ 0.4	81	25	27	21	48	2.34	- 1.33	0.50	0	8	14	4	12		Norfolk & Western R. R.		
Buckhannon.	Upshur.	1,472	23	50.2	- 0.8	84	25	23	7†	46	3.09	- 1.17	0.80	T.	14	5	16	4	8		H. A. Darnall.	
Cairo.	Ritchie.	667	11	55.9	+ 1.4	88	24†	22	21	48	3.08	- 0.74	0.76	0	14	5	16	9	w.	Van A. Zevely.		
Central Station.	Doddridge.	900	11	52.0	+ 0.9	87	25	21	8	48	1.99	- 1.02	0.43	0	11	12	5	13	w.	G. W. Sherwood.		
Charleston.	Kanawha.	598	28	56.6	+ 0.1	86	25†	32	7†	43	2.52	- 1.15	0.50	0	11	17	4	9	w.	R. C. Hewes.		
Creston.	Wirt.	612	12	54.2	+ 2.1	87	25	25	7	47	3.19	- 0.95	0.56	0	12	12	6	12	w.	J. M. Reed.		
Cuba.	Jackson.	544	13	53.1	+ 0.9	84	25	23	7	46	2.46	- 0.90	0.66	0	11	9	16	5	nw.	C. T. Perry.		
Doane.	Wayne.	6																		L. A. Smith.		
Elkhorn.	McDowell.	1,933	21	53.7	+ 0.6	81	24	29	21	40	2.46	- 1.28	0.68	T.	0	9	14	9	7		s.v.	
Elkins.	Randolph.	1,940	14	49.1	+ 0.4	85	25	20	8	48	3.75	+ 0.46	1.14	T.	16	7	13	10	10	w.	U. S. Weather Bureau.	
Fairmont.	Marion.	879	21	52.2		91	25	24	21	50	2.10	- 1.56	0.66	0	13	20	3	10	w.	F. P. Hall.		
Glenville.	Gilmer.	738	24	54.4	+ 1.5	92	25	25	7†	49	4.10	+ 0.36	1.18	0	7	15	1	14	w.	Joe N. Craddock.		
Grafton.	Taylor.	985	21	53.5	+ 2.2	88	25	23	21	48	2.40	- 1.51	0.90	0	9	18	3	9	w.	Joseph Gerken.		
Green Sulphur Springs.	Summers.	1,600	18	52.1	+ 1.4	84	24	21	49	1.61	- 1.69	0.48	0	10	11	7	12	w.	Arthur George.			
Hinton.	do.	1,400	24	53.1	- 0.2	86	24†	28	21	50	1.90	- 1.46	0.72	0	8	13	2	13	sw.	J. B. Lavender, C. E. Ferguson.		
Holcomb.	Nicholas.	1	48.8*			83*	25	22	21	48	4.33		1.23	0	13	14	1	15				
Huntington.	Cabell.	510	18	54.4	+ 0.8	86	25	32	21	44	2.48	- 1.35	0.64	0	9	18	0	12	w.	L. H. Hutchinson.		
Lewisburg.	Greenbrier.	2,200	13	50.4	+ 0.5	80	24†	23	21	48	3.04	- 0.32	1.40	0	5	23	5	6	nw.	George T. Arbogast.		
Logan.	Logan.	665	11	56.8	- 1.0	85	24	30	7†	45	3.10	- 1.89	1.30	0	9	19	5	6	e.	Dr. J. E. McDonald.		
Lost Creek.	Harrison.	1,033	13	49.2	- 0.6	85	25	20	7	48	2.46	- 1.06	0.69	0	9	14	7	9	w.	Allen Smith.		
Madison.	Boone.	704	8	53.4*		85*	25	27	7†	49*	2.54		1.26	T.	7	10 <sup>b</sup>	9 <sup>b</sup>	9 <sup>b</sup>		S. E. Bradley.		
Mannington.	Marietta.	967	11	51.4	+ 0.1	87	25	21	8†	48	2.33	- 2.05	0.80	0	13	13	2	13	sw.	James A. Morgan.		
Marlington.	Pocahontas.	2,169	17	47.5	0	76	23†	16	21	49	3.75	+ 0.70	1.30	1.0	7	14	16	0		C. J. McCarty.		
Morgantown.	Monongalia.	1,250	39	51.9	+ 0.9	84	25	24	8	38	2.77	- 0.65	0.80	0	12	17	5	8	w.	Horace Atwood.		
Moundsville.	Marshall.	640	11	54.0	+ 1.9	89	25	24	20	48	2.14	- 1.03	0.50	0	9	13	5	12	n.	M. L. Brown.		
New Cumberland.	Hancock.	987	14	50.4	+ 0.9	85	25	21	21	47	2.40	- 1.20	0.60	0	7	12	3	15	n.	Frank S. Evans.		
New Martinsville.	Wetzel.	634	20	55.2*	+ 2.3	90*	25	28*	21	48*	4.56	- 0.87	0.80	0	8	19	1	10	w.	William Ankrum.		
Nuttall.	Fayette.	2,252	21	49.8*	- 1.9	79	24	24	21	38	3.77	+ 0.49	1.85	0	4	12	4	5		Miss Donna Tullv.		
Parkersburg.	Wood.	638	13	53.0	0	86	25	29	8	41	1.81	- 1.10	0.53	0	13	13	6	10	n.	U.		

TABLE 1.—Climatological data for April, 1913. District No. 8—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.	Prevailing wind direction.	Observers.			
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelled.	Number of rainy days.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.			
<b>Ohio—Continued.</b>																					
Bellefontaine.	Logan.	1,276	34	47.2	-1.3	77	25	25	21	36	4.87	+1.53	0.73	0	12	14	8	8	sw.	Cory L. Lane.	
Bladensburg.	Knox.	1,100	20	48.7*	+0.5	81*	25	19*	21	44*	2.68	-0.30	0.75	0	11	10	13	7	nw.	Miss Mary Elliott.	
Brilliant.	Jefferson.	700		51.0 <sup>b</sup>		86	25	25*	77	42*	2.36		1.00	0	7	15	4	11	e.	Mrs. Mary K. Pennell.	
Cadiz.	Harrison.	1,245	9	51.0 <sup>b</sup>	+0.5	84	25	20	21	45	2.12	-1.22	0.52	0	5	9	17	2	nw.	Harry B. McConnell.	
Cambridge.	Guernsey.	803	21	50.2	+0.5	83	25	30	21	42	4.33	+1.31	1.41	0	12	13	7	10	nw.	Samuel Meaffey.	
Camp Dennison.	Hamilton.	570	20	53.0	+0.1	83	25	30	21	42	4.33	+1.20	0.80	0	12	14	2	14	nw.	Henry F. Pinkvoss.	
Canal Dover.	Tuscarawas.	884	20	50.8 <sup>b</sup>	+2.7	84 <sup>b</sup>	25	21 <sup>b</sup>	21	40*	2.11	-0.23	1.20	0	6	12	0	18	w.	Ed. S. Singluff.	
Canton.	Stark.	1,089	30	48.7	+0.5	85	25	22	21	52	3.47	+0.16	0.80	0	12	14	2	14	nw.	Carl H. Meyer.	
Cardington.	Morrow.	1,010	18	49.1*	+0.2	82*	25†	24*	21	35*	3.62	+0.37	1.07	0	6	12	0	18	nw.	J. W. Shaw.	
Chillicothe.	Ross.	630	10								2.84		0.87	0	7						Marion Mackey.
Cincinnati.	Hamilton.	628	42	54.0	-0.3	82	18	32	8	33	0.78	+0.89	1.23	0	11	10	8	12	nw.	U. S. Weather Bureau.	
Circleville.	Pickaway.	694	25	52.4	+0.6	87	25	27	7	39	3.72	+0.71	0.71	0	10	16	4	10	n.	Dr. H. R. Clarke.	
Clarington.	Monroe.	600	10	51.7	+0.4	88	25	23	8†	46	2.45	-1.69	0.60	0	9	12	6	12	sw.	Col. S. Tschappat.	
Columbus.	Franklin.	918	35	50.4	-0.6	82	25	28	8	30	3.91	+1.04	1.03	T.	13	15	6	9	nw.	U. S. Weather Bureau.	
Coshocton.	Coshocton.	770	4																	Mrs. Ada Jeffries.	
Dayton (1).	Montgomery.	899	2	50.6	-1.0	78	25	28	8	31	4.78	+1.88	1.77	0	9	10	11	9	n.	U. S. Weather Bureau.	
Dayton (2).	do.	790	32	51.0	-0.7	81	25	28	8†	35	5.31	+2.30	1.00	0	12						Mrs. Edith E. L. Boyer.
Delaware.	Delaware.	886	16	50.2	+1.6	86	25	24	8†	41	4.62	+1.70	1.22	0	10	16	5	9	sw.	DeWitt H. Leas.	
Demos.	Belmont.	1,325	25	49.9	-0.1	87	25	21	8	40	2.63	-0.63	0.49	0	13	14	4	12	n.	J. T. Dysart.	
Deuniison.	Tuscarawas.	846	3	51.9		86	25	22	21	47				0	10	15	11	4	n.	Water Supply Co.	
Frankfort.	Ross.	745	21	51.8	-0.4	86	25	26	21	43	3.43	+0.20	0.80	0	9	16	3	11	s.	O. A. Cory.	
Gallipolis.	Gallia.	580	1								2.88		0.82	0	11						Samuel F. Neal.
Garrettsville.	Portage.	1,005	29	47.8	+1.9	85	25	18	21	45	2.96	-0.04	0.52	T.	14	12	6	12	nw.	S. M. Luther.	
Granville.	Licking.	960	31	50.5	+0.9	84	25	24	21	40	3.86	+1.01	1.24	T.	12	16	4	10	e.	Dr. L. E. Davils.	
Gratiot.	do.	1,000	24	50.1	0.0	82	25	24	21	40	2.84	-0.06	0.54	0	13	7	18	5	nw.	W. B. Longstreth.	
Green.	Adams.	500	20	54.0	+1.0	84	23	29	21	48	2.49	-0.84	0.75	0	7	10	12	8	nw.	W. F. Kenyon.	
Green Hill.	Columbiana.	1,135	20	47.8	+1.2	82	25	19	21	44	2.27	-0.60	0.38	T.	10	14	8	8	nw.	Jos. E. Bentley.	
Greenville.	Darkie.	1,060	27	50.8	+0.9	81	23	29	8	39	3.98	+0.88	1.15	0	14	14	5	11	s.	Geo. A. Katzeberger.	
Hamilton.	Butler.	601	1								5.50		2.33	0	7	15	3	12	n.	Earl W. Stout.	
Haydenville.	Hocking.	700	1								2.98		0.65	0	8				nw.	H. W. Stiers.	
Hillsboro.	Highland.	1,063	34	55.0	+1.6	87	25	30	21	46	3.54	-0.03	1.04	0	13	16	3	11	nw.	Carey H. Roush.	
Intonton.	Lawrence.	575	30	55.0	+1.6	87	25	30	21	46	3.54	-0.03	1.04	0	9	16	4	10	n.	James Bull.	
Kenton.	Hardin.	1,015	21	47.8*	-2.7	81	25	24	21	38	3.45	+0.03	0.80	0	9	22	2	6	ne.	Frank B. Rarey.	
Killbuck.	Holmes.	1,087	20	51.6	+2.6	84	25	22	21	42	3.29	-0.03	1.17	0	9				nw.	John A. Schonauer.	
Kings Mills.	Warren.	640	1								4.41		1.10	0	12	17	1	12	n.	Frank M. See.	
Lancaster.	Fairfield.	898	18	51.3	+0.5	83	25	27	8	34	3.36	+0.22	0.85	0	9	15	5	10	n.	R. L. Renshaw.	
McConnellsburg.	Morgan.	710	29	51.4	+0.6	83	25	25	24	45	2.28	-0.82	0.49	0	9	10	8	12	n.	C. H. Morris.	
Marietta.	Washington.	627	93	54.2	+0.9	86 <sup>d</sup>	24†	25	5	42	3.21			0	11	6	14	10	n.	Prof. T. D. Biscoe.	
Marion.	Marion.	980	35	50.4	+0.7	85	25	23	21	40	4.39	+1.25	0.87	0	11	14	6	10	n.	Dr. E. H. Raffensperger.	
Mifflordton.	Knox.	1,200	21	49.2	+1.5	82	25	21	21	41	3.21	+0.11	1.00	0	11	14	6	10	n.	L. H. Burgess.	
Milligan.	Perry.	875	20	51.3	+1.1	85	25	19	21	52	2.39	-0.65	0.57	0	9	9	15	6	n.	V. C. Eveland.	
Milport.	Columbiana.	1,148	20	48.4	+0.3	84	25	19	21	47	2.28	-0.80	0.51	0	11	6	13	6	n.	G. F. Copeland.	
Nellie.	Coshocton.	850	13	49.9	+0.5	82	23	26	8†	34	3.24	+0.39	0.97	0	9	10	7	13	n.	Ethel L. Gammertsfelder.	
New Berlin.	Stark.	1,100	20	48.4	+0.6	82	25	20	20	40	2.82	-0.67	0.53	0	11	17	4	9	n.	Clayton Holl.	
New Waterford.	Columbiana.	1,053	18	49.1	+2.3	90	25	21	8	52	2.41	-0.78	0	0	15	7	8	n.	Sam. C. Scott.		
O. S. University.	Franklin.	757	30	50.4	+0.5	81	25	28	7†	33	4.27	+1.26	0.80	0	12	8	13	9	n.	Prof. H. C. Lord.	
Oregonia.	Warren.																			E. H. Stephens.	
Pataksala.	Licking.	1,015	21	49.8	0.0	83	25	23	21	41	3.37	-0.14	0.68	0	14	12	6	12	n.	J. N. Ridener.	
Peebles.	Adams.	645	30	50.6		83	24	22	21	48	3.60		0.56	0	14	15	6	10	n.	Ora O. Smalley.	
Philo.	Muskingum.	1,018	18	51.4	+0.7	84	25	24	21	38	3.25	-0.50	0.41	0	9	15	8	7	n.	L. C. Burckholter.	
Piqua.	Miami.	847	3																	Harry L. Roberts.	
Plattsburgh.	Clark.	1,130	20	49.6	-0.6	79	24†	26	8	39	4.18	+1.14	0.98	0	9	11	11	8	n.	F. E. Stewart.	
Portsmouth.	Clark.	527	82	53.9*	-1.7	87 <sup>d</sup>	23†	31 <sup>c</sup>	8†	40 <sup>c</sup>	4.18	+1.14	0.98	0	9	11	11	8	n.	Dr. H. A. Schirrmann.	
Prospect.	Marion.	909	3																	Neil J. Gast.	
Sidney.	Shelby.	985	30	49.6	-0.3	81	24†	27	21	51	4.18	+0.94	1.08	0	11	15	5	10	n.	Hamline B. Blake.	
Somersett.	Perry.	1,080	14	51.4	+1.0	84	25	25	8	39	2.83	-0.14	0.58	T.	12	16	7	7	n.	Miss M. W. Sheridan.	
Springfield.	Clark.	980	19								5.36	+1.28	1.53	T.	9	12	12	6	n.	W. A. Webster.	
Summerfield.	Noble.	1,187	7	50.7		84	25	20	21	45	2.81		0.50	T.	12	11	11	8	n.	H. R. McClintock.	
Syracuse.	Meigs.	583	20	54.0		90	25	26	21	48	5.41		0.91	0	13	13	6	11	n.	Irving R. Karr.	
Thurman.	Gallia.	696	20	53.8	-0.2	86	25	28	21	44	2.60	-0.01	0.52	0	8	12	7	11	n.	D. D. Thomas.	
Toboso.	Licking.			50.2		83 <sup>b</sup>	25	23	8	46	3.54	-0.95	0.11	0	11				n.	H. A. Albyn.	
Urbana.	Champaign.	1,031	45	49.8	+0.5	81	24	26	7†	45	5.14	+1.08	1.48	T.	11	10	12	8	n.	Prof. J. H. Williams.	
Warren.	Trumbull.	900	24	48.9	+2.0	84	24	23	21	42	2.67	-0.19	0.62	T.	11	16	7	7	n.	M. D. McCorkle.	
Waverly.	Pike.	590	30	51.7	-1.4	82	24†	26	21	44	3.77	+0.41	0.90	0	13	16	4	10	n.	Dr. Peru Hutt.	
Waynesville.	Warren.	700	28	51.0	+0.7	79	25	29	6†	36	5.39	+2.33	2.04	0	9	12	10	8	n.	Charles Michener.	
Wooster.	Warren.	1,030	34	48.9	+1.1	83															

TABLE 1.—Climatological data for April, 1913. District No. 3—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.	Prevailing wind direction.	Observers.		
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelting.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
<i>Indiana—Continued.</i>																				
Logansport.	Cass.	620	33	52.9	.....	82	23	31	20	44	0	0	12	14	0	6	nw.	Chas. Massena.		
Madison.	Jefferson.	460	21	55.6	+ 0.8	85	18†	33	6	42	4.18	+ 0.95	1.04	0	12	10	12	8	Miss F. Cooperider.	
Marengo.	Crawford.	363	31	52.6	- 2.8	84	2	22	9	41	0	0	12	15	4	11	e.	J. M. Johnson.		
Marion.	Grant.	814	27	50.4	- 0.3	80	22†	28	8	40	3.33	+ 0.02	1.17	0	10	19	1	10	James F. Hood.	
Mauzy.	Rush.	980	33	48.8	- 1.3	77	24	27	6†	38	4.09	+ 0.90	1.05	0	12	15	4	11	Elwood Kirkwood.	
Monticello.	White.	674	3*	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.56	0	10	14	10	6	J. E. Loughry.	
Moores Hill.	Dearborn.	980	12	51.8	+ 1.1	80	18	29	6	35	4.36	+ 0.63	1.38	0	11	14	3	13	W. S. Bigney.	
Mount Vernon.	Possey.	410	27	55.6	0.3	84	18	38	7	39	2.87	- 1.65	0.60	0	12	11	4	15	Guy B. Green.	
Nashville.	Brown.	52.0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.13	T.	12	9	9	12	W. C. Goble.	
Paoli.	Orange.	611	16	53.4	+ 0.1	81	18	28	5	42	3.36	+ 0.02	0.83	0	12	14	4	12	ne.	
Princeton.	Gibson.	481	31	55.4	+ 1.0	89	18	32	5	38	3.89	+ 0.58	0.98	0	9	16	4	10	Albert Mills.	
Richmond.	Wayne.	972	28	50.2	+ 0.1	79	23†	29	6†	37	4.07	+ 1.14	1.61	0	12	12	11	7	Walter Vossler.	
Rochester.	Fulton.	775	8	49.4	.....	78	22	27	6	39	3.08	.....	0.94	0	11	13	6	11	G. P. Keith.	
Rockville.	Parke.	722	27	52.8	+ 0.5	82	22	29	6	39	2.84	- 0.65	1.24	T.	13	12	9	9	C. A. Lee.	
Rome.	Perry.	370	10	56.6	+ 0.5	86	18	35	5	43	2.25	- 2.76	0.48	0	14	15	1	14	sw.	
Salamonie.	Jay.	950	8	48.6	.....	79	24	24	7	38	5.58	.....	1.03	0	12	12	9	9	Adam Anspach.	
Salem.	Washington.	717	20	52.7	- 0.3	82	18	31	5†	42	3.07	- 0.25	0.81	0	13	10	8	12	S. A. Armstrong.	
Scottsburg.	Scott.	570	19	53.8	- 0.8	83	18	35	6†	41	4.12	+ 1.16	1.27	0	9	12*	4*	13*	Emmet S. Allen.	
Seymour.	Jackson.	610	26	53.6	- 0.3	84	18	31	6	42	4.49	+ 1.06	0	T.	10	13	8	9	Frank H. Park.	
Shelbyville.	Shelby.	768	9	51.9	.....	80	18†	31	6†	38	3.90	.....	0.87	0	12	12	9	9	Edgar G. Hodson.	
Shoals.	Martin.	523	6	54.2*	.....	81*	30	34*	5	42*	4.76	.....	2.78	0	11	11*	3*	15*	Rev. G. Halleck Rowe.	
Terre Haute.	Vigo.	498	23	53.4	- 0.6	80	22	35	7	31	2.17	- 1.51	0.99	0	10	8	13	9	U. S. Weather Bureau.	
Veedersburg.	Fountain.	612	14	53.2	+ 1.7	82	18†	27	6	38	2.81	+ 0.19	1.07	0	12	18*	6*	5*	La. A. Culver, jr.	
Vevay.	Switzerland.	525	32	54.3	- 1.1	86	18	35	6†	36	4.80	+ 1.50	1.70	0	10	8	7	15	Miss Frederica Boerner	
Vincennes.	Knox.	431	21	55.2	+ 0.6	85	18	37	14	39	4.30	+ 0.42	1.20	0	8	12	4	14	Garrett V. List.	
Washington.	Davies.	484	17	54.6	+ 1.6	82	18	35	5	33	4.70	+ 1.17	1.39	0	13	15	3	12	Charles C. Feagans.	
Whitestown.	Boone.	529	5	49.8	.....	80	22	30	8	45	4.12	.....	1.11	0	10	9	16	Clyde O. Laughner.		
Winona Lake.	Kosciusko.	865	6	49.8	.....	80	24	26	7†	41	2.90	.....	0.49	0	10	8	15	Rev. Albert A. Young.		
Worthington.	Greene.	526	31	54.0	+ 0.2	83	18	32	14	37	4.17	+ 0.65	1.07	0	10	11	9	10	D. W. Solliday.	
<i>Illinois.</i>																				
Albion.	Edwards.	531	22	55.3	+ 0.2	84	23	34	5	45	3.67	+ 0.06	0.84	0	10	17	3	10	B. F. Michels.	
Casey.	Clark.	645	10	.....	.....	.....	.....	.....	.....	.....	2.42	- 1.21	0.80	0	8	16	6	8	William Chenoweth.	
Charleston.	Coles.	720	28	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	7	16	4	10	Jacob B. Daisy.		
Danville.	Vermilion.	604	12	52.8	+ 0.8	84	22	30	6	42	2.87	+ 0.09	0.95	0	12	16	4	10	J. J. Lemon.	
Equality.	Gallatin.	421	15	57.6*	+ 1.2	90	18	38*	5†	37	3.07	- 1.29	0.80	0	7	16	4	10	Dr. L. W. Gordon.	
Fairfield.	Wayne.	450	20	55.4	- 0.1	86	18	31	5	42	3.70	+ 0.33	0.85	0	10	15	5	10	George A. Tromly.	
Flora.	Clay.	495	27	54.6	+ 0.2	85	18	34	5†	40	2.58	- 1.20	0.84	T.	8	14	7	9	W. L. Hanna.	
Goleconda.	Pope.	500	35	57.8	+ 0.1	89	18	37	5	40	3.60	- 0.50	0.82	0	8	16	4	10	Dr. D. Lawrence.	
Hoopeston.	Vermilion.	715	11	51.1	+ 0.6	83	22	27	6	44	2.51	- 1.47	0.99	0	8	20	3	7	S. F. Hoskinson.	
McLeansboro.	Hamilton.	462	30	54.8	- 0.7	86	18	31	5	40	3.30	- 0.43	1.03	0	9	19	2	9	Prof. W. C. Fairweather.	
Metropolis.	Massac.	346	2	.....	.....	.....	.....	.....	.....	.....	0	0	0.95	0	8	20	3	7	Henry H. Humna.	
Montrose.	Effingham.	599	3	52.1	.....	81	22	31	5	39	2.12	.....	0.79	0	9	11	11	5	J. C. Spitzer.	
Mount Carmel.	Wabash.	424	12	54.0	- 0.1	83	18	35	5	36	3.86	- 0.05	1.32	0	11	12	1	11	Mrs. H. M. Phillips.	
New Burnside.	Johnson.	613	18	53.6	- 2.6	81	18	30	5	39	3.43	- 0.93	0.75	0	12	18	1	11	Thomas H. McCabe.	
Newton.	Jasper.	484	2	.....	.....	.....	.....	.....	.....	.....	2.16	0	0.74	T.	8	16	5	9	J. M. Hicks.	
Olney.	Richland.	486	26	52.6	- 2.2	83	18	33	5†	42	3.23	- 0.52	1.05	0	9	12	3	12	John T. Ratcliff.	
Palestine.	Crawford.	500	31	54.4	+ 0.3	83	18	35	5	37	2.53	- 1.07	0.67	0	9	14	4	12	Duane Shaw.	
Paris.	Edgar.	600	20	50.9	- 0.3	89	18	30	7	36	2.46	- 1.09	1.10	0	6	5	23	H. P. Twyman.		
Philo.	Champaign.	700	29	51.0	- 0.2	82	22	30	6†	44	2.35	- 1.03	0.85	0	8	16	5	9	H. A. Burr.	
Rileyville.	Saline.	400	16	.....	.....	.....	.....	.....	.....	.....	2.71	- 0.84	0.60	0	9	16	2	12	W. H. Thornberry.	
Shawneetown.	Galatin.	307	3	.....	.....	.....	.....	.....	.....	.....	3.90	0	1.00	0	6	6	2	7	Mrs. Mary O. Spivey.	
Tuscola.	Douglas.	644	20	.....	.....	.....	.....	.....	.....	.....	2.12	- 1.41	0.58	0	10	10	12	8	Joseph O'Neal.	
Urbana.	Champaign.	751	11	51.3	+ 1.6	80	22	31	6	34	2.19	- 1.68	0.53	T.	9	6	17	7	University of Illinois.	
<i>Kentucky.</i>																				
Alpha.	Clinton.	19	57.6	+ 0.3	82	18†	37	7	35	2.71	- 2.56	0.86	T.	5	15	3	12	w.	W. W. Hicks.	
Anchorage.	Jefferson.	700	12	53.6	+ 0.9	82	18	32	1	41	2.39	- 1.55	0.75	0	12	16	1	13	sw.	C. E. Barrett.
Bardstown.	Nelson.	637	16	56.5	+ 2.1	85	18	36	1†	41	3.40	- 0.48	1.30	0	12	16	4	10	se.	T. S. Talbott.
Beattyville.	Lee.	650	9	54.1	+ 0.7	87	25	29	21	50	3.04	- 1.98	0.58	0	10	14	3	13	e.	G. W. Cann.
Beaver Dam.	Ohio.	441	10	55.6	+ 0.8	85	18	34	1	46	1.58	- 3.04	0.55	0	6	14	7	9	s.	W. T. Austin.
Berea.	Madison.	1,070	12	55.8	+ 1.3	84	18†	32	7	41	2.34	- 1.25	0.80	0	11	18	2	10	sw.	C. F. Rumold.
Blandville.	Ballard.	445	32	58.3	+ 1.1	84	18	38	5	32	3.68	- 0.51	1.15	0	9	17	5	8	E. W. Horr.	
Bowling Green.	Warren.	500	24	57.4	- 0.5	89	18	36	21	48	1.18	- 2.59	0.48	0	7	16	7	7	Mrs. L. G. Causey.	
Burnside.	Calhoun.	775	22	.....	.....	.....	.....	.....	.....	.....	2.05	- 1.90	0.48	0	6	6	2	13	G. M. Estes.	
Carlsbad.	McLean.	397	10	57.6	.....	86	18	37	5	42	2.34	- 2.50	0.63	0	11	12	7	11	W. A. Taylor.	
Earlington.	Boyd.	544	24	.....	.....	.....	.....	.....	.....	.....	2.84	- 0.62	0.80	0	10	15	2	13	Mrs. Mertie M. Bruns.	
Farmers.	Hopkins.	370	23	57.3	+ 0.1	88	18	33	5	42	2.77	- 1.55	0.94	0	10	15				

TABLE 1.—Climatological data for April, 1913. District No. 3—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.	Prevailing wind direction.	Observers.			
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmeasured.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.			
<b>Kentucky—Continued.</b>																					
Shelby City.....	Boyle.	1,087	19	55.3	+ 0.4	84	18	27	6	40	4.04	+ 1.01	0.86	0	11	18	1	11	sw.	H. F. Ewing.	
Shelbyville.....	Shelby.	759	24	55.3	+ 0.4	83	18	35	21	45	2.82	- 2.41	0.86	0	12	12	6	12	n.	C. R. Burnett.	
Taylorsville.....	Spencer.	489	11	54.4	+ 0.2	83	21	32	7	45	4.32	+ 0.59	1.15	T.	10	15	1	14	w.	E. D. Bourne.	
Williamsburg.....	Whitley.	939	17	— 1.3	82	2†	32	30	13	44	3.54	+ 0.10	1.13	0	12	16	4	10	.....	Noble C. Jones.	
Williamstown.....	Grant.	943	11	51.8	+ 0.2	83	18	30	13	44	3.54	+ 0.10	1.13	0	12	16	4	10	.....	Miss Rose Carter.	
<b>Tennessee.</b>																					
Ashwood.....	Maury.	725	40	58.6	+ 0.3	89	19	35	51	43	1.67	- 3.08	0.87	0	5	13	4	13	s.	Mrs. Joseph W. Fleming.	
Benton.....	Polk.	880	29	58.4	- 1.0	83	3†	33	6	44	2.09	- 2.05	0.72	0	7	15	6	9	w.	George L. Williams.	
Birds Bridge.....	Greene.	7	.....	.....	.....	.....	.....	.....	.....	.....	2.32	.....	0.95	0	5	20	1	9	e.	David B. George.	
Bluff City.....	Sullivan.	18	.....	.....	.....	.....	.....	.....	.....	.....	3.07	- 0.06	1.54	0	7	12	3	15	.....	Walter C. Masengill.	
Byrdstown.....	Pickett.	1,026	21	58.4	+ 2.0	84	18†	38	61	40	2.28	- 2.26	0.78	0	6	7	11	12	se.	John Lacy.	
Carthage.....	Smith.	500	30	59.0	+ 0.4	86	18	37	6	41	2.13	- 2.06	0.71	0	10	18	0	12	.....	Earl C. Pickering.	
Cedar Hill.....	Robertson.	625	15	57.8	+ 0.2	89	18	36	71	39	1.32	- 3.33	0.70	0	11	16	4	10	s.	J. Frank Ruffin.	
Celina.....	Clay.	494	10	.....	.....	.....	.....	.....	.....	.....	2.00	- 2.49	0.65	0	7	15	2	13	n.	Charles M. Anderson.	
Charleston.....	Bradley.	709	29	58.4	- 0.5	83	18	42	28	34	1.58	- 2.37	0.50	0	8	17	3	10	.....	John T. Weeks.	
Chattanooga.....	Hamilton.	808	34	59.5	- 0.5	83	18	42	5	43	2.06	- 2.63	0.90	0	12	16	3	11	nw.	U. S. Weather Bureau.	
Clarksville.....	Montgomery.	500	53	58.4	+ 0.7	89	18	37	.....	.....	2.15	- 2.10	0.50	0	8	16	1	13	sw.	Prof. James A. Lyon.	
Clinton.....	Anderson.	800	29	.....	.....	.....	.....	.....	.....	.....	2.48	.....	0	7	14	3	13	.....	H. C. Slover.		
Crossville.....	Cumberland.	1,895 <sup>1</sup>	1	.....	.....	.....	.....	.....	.....	.....	3.64	.....	1.50	0	7	14	3	13	e.	J. E. Converse.	
Dandridge.....	Jefferson.	8	.....	.....	.....	.....	.....	.....	.....	.....	3.25	- 0.13	1.00	T.	10	14	0	16	w.	James E. Swann.	
Decatur.....	Meigs.	850	18	57.9	+ 0.1	88	18	32	6	49	1.42	- 3.61	0.60	0	8	16	4	10	sw.	J. Worth Lillard.	
Dickson.....	Dickson.	800	20	58.0	+ 0.2	86	18	35	6	41	2.33	- 2.58	1.10	0	5	15	8	7	s.	Nathan R. Sugg.	
Dover.....	Stewart.	500	17	59.2	+ 0.8	89	18	34	25	41	4.07	+ 0.23	1.39	0	6	16	4	10	.....	Asa M. Tippit.	
Dunlap.....	Sequatchie.	726	4	58.4	.....	87	18	34	6	47	1.14	.....	0.45	0	5	12	11	7	.....	S. Bradford Boyd.	
Elizabethhton.....	Carter.	1,575	22	.....	.....	.....	.....	.....	.....	.....	3.25	- 0.13	1.00	0	10	14	0	16	w.	Charles Boyd.	
Erasmus.....	Cumberland.	1,850	16	53.8	+ 1.2	83	18	31	11	44	2.13	- 3.34	0.84	T.	8	14	7	9	se.	Mrs. Sarah E. Ashley.	
Florence.....	Rutherford.	560	31	58.5	- 0.4	82	18	37	6	34	2.45	- 1.69	1.10	0	7	19	4	7	s.	Erastus P. Bell.	
Franklin.....	Williamson.	648	25	58.6	+ 0.7	82	18	37	6	35	1.91	- 3.10	0.72	0	4	15	7	8	.....	Young M. Rizer.	
Halls Hill.....	Rutherford.	10	.....	.....	.....	.....	.....	.....	.....	.....	2.32	- 2.70	0.78	0	7	14	3	13	.....	Edward F. Wright.	
Hohenwald.....	Lewis.	983	30	60.7	+ 2.5	85	18	33	13	38	2.94	- 1.75	1.15	0	8	17	6	7	nw.	Mrs. Mary Lutzelman.	
Iron City.....	Lawrence.	600	18	58.8	+ 0.1	88	18	31	28	48	1.90	- 3.02	1.00	0	4	11	16	3	.....	Capt. H. Paul Seavy.	
Jefferson City.....	Jefferson.	3	.....	.....	.....	.....	.....	.....	.....	.....	1.94	.....	0.55	0	12	15	5	6	w.	Calvin C. Maddox.	
Johnson City.....	Washington.	1,620	20	54.2	- 0.7	88	25	30	7	45	2.49	- 1.20	0.73	0	7	19	5	6	.....	Ward Crosby.	
Johnsonville.....	Humphreys.	364	29	59.9	+ 1.3	89	18	36	61	46	4.17	- 0.43	1.50	0	8	11	7	12	n.	Miss Sallie B. Mathews.	
Kingston.....	Roane.	29	.....	.....	.....	.....	.....	.....	.....	.....	1.35	- 2.83	0.38	0	8	17	0	13	.....	Henry Crumbiss.	
Knoxville.....	Knox.	977	42	57.4	0.0	84	18	38	28	38	2.00	- 2.64	0.94	0	8	10	7	13	sw.	U. S. Weather Bureau.	
Lebanon.....	Wilson.	522	4	58.9	.....	85	18	37	61	38	3.00	.....	0.79	0	10	11	6	13	.....	H. Logan Fields.	
Lewisburg.....	Marshall.	727	19	58.2	+ 0.2	86	18	35	6	42	2.50	- 1.59	0.93	0	8	14	7	9	nw.	Dr. Robert D. Crutcher.	
Liberty.....	Dekab.	672	16	.....	.....	.....	.....	.....	.....	.....	2.56	.....	0.65	0	7	14	0	16	.....	Braffett Evans.	
Loudon.....	Loudon.	816	22	.....	.....	.....	.....	.....	.....	.....	2.38	- 1.79	0.91	0	8	18	1	11	w.	Robert W. Clark.	
Lynville.....	Giles.	770	26	57.9	- 0.2	82	18	36	6	40	2.19	- 2.54	0.87	0	7	20	1	9	s.	Col. James H. Burrow.	
McGhee.....	Monroe.	770	8	.....	.....	.....	.....	.....	.....	.....	2.45	.....	0.75	0	7	17	7	6	.....	Miss Alice L. Headrick.	
McMinnville.....	Warren.	1,011	32	58.8	+ 0.9	85	18	34	6	43	2.81	- 2.34	0.84	0	8	17	7	6	n.	Horace H. Stiles.	
Maryville.....	Blount.	1,050	20	58.8	+ 0.9	85	18	34	15	42	4.25	+ 0.32	1.87	0	0	11	16	7	7	.....	Mrs. Sam T. Broyles.
Mountain City.....	Johnson.	2,486	16	51.8	+ 1.6	81	24	32	21	49	2.77	- 0.88	0.79	T.	11	16	7	7	.....	Edward E. Barry.	
Nashville.....	Davidson.	654	24	58.6	- 0.5	85	18	39	33	1.05	2.71	0.63	0	9	14	2	14	w.	U. S. Weather Bureau.		
Newport.....	Cooke.	1,280	23	55.7	- 1.0	82	3	36	7	36	3.23	- 0.36	1.20	0	6	13	3	14	.....	Dr. Charles T. Burnett.	
New River.....	Scott.	1,215	5	.....	.....	.....	.....	.....	.....	.....	2.94	.....	0.57	0	8	16	2	12	nw.	Burl W. Buttram.	
Palmetto.....	Bedford.	770	23	58.6	- 0.3	85	18	34	28	38	2.93	- 1.44	1.31	0	6	13	5	10	.....	Mrs. Ross Woods.	
Perryville.....	Decatur.	387	17	59.6	.....	85	18	35	15	42	4.25	+ 0.32	1.87	0	6	17	1	12	.....	Oliver C. Kirksey.	
Pine wood.....	Hickman.	7	59.4	.....	.....	90	18	32	6	55	2.19	.....	0	0	9	14	8	8	w.	Miss Carrie Cash.	
Rogersville.....	Hawkins.	1,150	29	56.2	+ 0.3	83	18†	34	61	44	1.97	- 1.59	0.79	0	9	14	8	8	.....	Fred Beal.	
Rugby.....	Morgan.	1,410	24	54.2	- 0.2	82	18	32	6	51	2.83	- 1.81	0.80	0	7	10	6	14	s.	Samuel G. Wilson.	
Savannah.....	Hardin.	442	30	60.2	- 0.2	87	18	37	61	43	5.32	+ 1.06	1.62	0	7	14	6	10	n.	W. H. Carrington.	
Sevierville.....	Sevier.	7	56.8	+ 1.2	84	18†	33	61	46	2.43	- 2.02	0.45	0	11	7	6	17	s.w.	Herbert O. Eckel.		
Sewanee.....	Franklin.	2,000	19	52.8	- 2.5	80	22	34	5†	23	1.24	- 3.21	0.53	0	6	13	4	13	n.	University of the South.	
Sparta.....	White.	920	7	58.0	.....	86	18	34	6	46	2.00	.....	0.99	0	6	12	9	9	w.	Ernest H. Hull.	
Springville.....	Henry.	377	11	58.2	+ 0.2	83	2	34	5	43	4.38	- 0.99	2.03	0	10	17	7	6	.....	Hudnall A. Boden.	
Tazewell.....	Clayborne.	1,350	16	53.2	- 3.3	83	25	29	7	48	1.82	- 2.13	0.60	0	9	11	5	14	n.w.	J. Caloway Carr.	
Tullahoma.....	Coffee.	1,075	26	57.8	+ 0.5	83	18	34	6	39	2.74	- 1.91	1.03	0	9	12	13	5	n.	Reuben T. Moore.	
Walling.....	White.	909	9	.....	.....	.....	.....	.....	.....	.....	2.10	.....	0.84	0	9	13	3	14	s.	John K. Roberts.	
Waynesboro.....	Wayne.	753	28	58.4	+ 0.2	85	18	32	28	43	3.37	- 0.86	1.50	0	11	12	9	9	n.	Harry C. Boyd.	
Wildersville.....	Henderson.	400	17	58.0	- 0.5	83	17†	35	26	43	5.53	+ 1.40	2.00	0	6	15	7	8	.....	William R. Wilson.	
Worsham.....	Sumner.	550	11	.....	.....	.....	.....	.....	.....	.....	2.36	- 2.21	0.79	0	7	16	4	10	w.	James G. Elizer.	
Yukon.....	Lincoln.	850																			

TABLE 1.—*Climatological data for April, 1913. District No. 8—Continued.*

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.	Observers.			
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
<i>North Carolina—Contd.</i>																				
Hendersonville.	Henderson	2,167	16	53.64	— 0.5	79	24	32	21	42	2.93	— 1.39	2.04	0	9	nw.	Dr. L. B. Morse.			
Highlands.	Macon	3,850	23	49.0	— 0.5	72	19†	27	22	39	4.89	— 1.61	3.85	6.0	4	14	10	nw.	T. G. Harbison.	
Hot Springs.	Madison	1,326	15	56.1	— 0.8	82	2†	34	6†	43	2.98	— 0.81	0.81	0	9	17	4	w.	P. A. Garner.	
Jefferson.	Ashe	2,900	6	50.2	—	81	24	24	22	50	4.29	— 1.22	T.	12	10	2	18	w.	Prof. E. J. Johnston.	
Marshall.	Madison	1,646	11	54.0	— 0.3	81	25	31	21	42	2.68	— 0.94	0.72	0	9	13	4	w.	M. L. Church.	
Murphy.	Cherokee	1,614	37	—	—	—	—	—	—	—	0.86	— 4.17	0.22	0	10	—	—	—	Miss Victoria Mingus.	
Rock House.	Macon	3,100	21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Barry C. Hawkins.		
Transon.	Ashe	2,600	1	49.6	—	78	24	23	21	43	5.37	—	2.00	1.0	10	16	9	5	S. M. Transon.	
Waynesville.	Haywood	2,792	19	52.3	— 0.4	81	24	31	6	42	2.72	— 1.29	0.75	T.	7	11	7	12	Mrs. Chas. E. Quinlan.	
<i>Virginia.</i>																				
Blacksburg.	Montgomery	2,170	22	51.0	+ 0.8	83	24	24	21	44	2.82	— 0.11	1.45	0	12	16	9	5	w.	Agricultural Experiment Sta.
Burkes Garden.	Tazewell	3,250	18	46.6	— 0.8	76	24	20	21	41	2.38	— 1.00	1.17	1.0	10	13	3	14	w.	G. H. Grever.
Erik Knob.	Lee	3,243	10	54.4	+ 0.5	79	23†	34	15	33	1.74	— 2.94	0.49	0	10	13	10	7	nw.	Henry Nicoll.
Ivanhoe.	Wythe	2,028	9	51.4	—	78	23†	32	7†	34	3.64	—	1.58	0	10	17	4	9	w.	Miss Alice G. Jewett.
Lebanon.	Russell	2,131	3	51.6	—	86	25	27	7	44	2.71	—	0.50	0	10	15	3	12	ne.	M. E. Hunter.
Max Meadows.	Wythe	2,028	17	51.3	0.0	82	23†	24	21	47	2.99	— 0.29	1.30	T.	6	15	8	7	w.	James M. Graham.
Mendota.	Washington	1,350	4	—	—	—	—	—	—	—	2.76	—	0.68	0	9	—	—	—	Frank M. Barker.	
Mountain Lake.	Giles	4,348	3	—	—	78	26	—	—	—	3.51	—	1.80	0.1	6	15	7	8	H. E. Dorland.	
Radford.	Montgomery	1,773	4	—	—	—	—	—	—	—	2.87	—	1.25	0	5	—	—	—	Arthur Roberts.	
Speers Ferry.	Scott	1,221	17	51.3	— 0.7	81	24	27	21	40	1.68	— 2.05	0.50	T.	9	—	—	—	Miss L. E. Venable.	
Wytheville.	Wythe	2,293	20	—	—	—	—	—	—	—	3.13	— 0.53	1.43	1.0	11	14	7	9	nw.	U. S. Weather Bureau.

\*, †, ‡, etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.

\*\* Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.

† Also on other dates.

‡ Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for April, 1913. District No. 3, Ohio Valley.*

Stations.	Watershed.	Day of month.																													Total.		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
<i>New York.</i>																																	
Allegany.....	Allegany.....	.16	.29	.29	.30	.13	T.				T.	.20	.05			.06				T.	.03			.04	.51			.08	.190	.144	.12	5.67	
Bolivar.....	do.....	.32	.18	.18	.20						T.																						4.36
Olean   .....	do.....	.03	.12	.16	.30	.10	T.																									3.77	
<i>Pennsylvania.</i>																																	
Aleppo.....	Ohio.....	.05	.06		.08		T.				T.	.57		.15		.09	.05																2.05
Baldwin.....	Allegheny.....	T.	T.	.18	T.	T.				T.	.60		.08	.17																		2.22	
Beaver Dam   .....	Ohio.....	.04		.27	.01	.15	T.				T.	.01	.35	.09	.03	.40	.05	.03													2.26		
Beaver Falls   .....	do.....	.01		.18	T.	.18	T.	T.		T.	.30	.04	.01	.53	.02	T.															2.14		
Brookville.....	Allegheny.....			.14	.20					T.	.01	.55	.02	.04	.26	.03	.13														2.90		
California.....	Monongahela.....	.88	.16	.01		T.				T.	.60		.17	.11	T.	.16															3.13		
Cheat Haven.....	do.....	T.	.26	T.	T.					T.	.02	.53	.01	.08	.20	.15	T.															2.47	
Clarion   .....	Allegheny.....		.10		.15	.20				T.	.10	.45	.10	T.	.70																2.85		
Claysville.....	Ohio.....	.95	.11	.01	.20					T.	.10	.53	T.	.20	.03	.08	.02														3.28		
Confluence   .....	Youghiogheny.....	T.	T.	.40		T.				T.	.16	.45	.55	.22	.25	.22															3.28		
Coraopolis   .....	Ohio.....	.06		.30	.01	.20	T.	T.		T.	.44	.12	.02	.28	.03	.06														2.54			
Davis Island Dam   .....	do.....	.04	T.	.29	.03	.12	T.	T.		T.	.40	.14	.07	.29	.03	.08														2.58			
Derry Station.....	Allegheny.....	.14	.02		.08	T.				T.	.55			.42	.09																2.56		
Elwood City   .....	Ohio.....	.03		.10	.03	.18	.01	T.		T.	.02	.38	.04	.02	.31		.04		.09											2.28			
Franklin   .....	Allegheny.....	.05		.17	.02	.44	.04	T.		T.	.03	.46	T.	.59																2.65			
Freeport   .....	do.....	T.	.17	T.	.10	T.	T.		T.	.40	.22	.21	.32	.04	.04	T.															2.63		
Greensboro   .....	Monongahela.....	.10		.44		.06	.04	T.		T.	.10	.48	.04	.10	.20				.10											2.64			
Greensburg.....	Youghiogheny.....	.25		T.	.12	T.	T.		T.	.23		.53	.05	.07	.09	.02															2.14		
Greenville.....	Ohio.....	.22		T.	.12	T.	T.		T.	.70		.18	.02			.04	.04														2.10		
Grove City.....	do.....	.11	.10	.56	.01	T.				T.	.66	.36	T.	.34	T.	T.															2.66		
Herrs Island Dam   .....	Allegheny.....	.04	T.	.26	.01	.12	T.		T.	.31	.18	.05	.57	.04	.05															2.61			
Indiana.....	do.....	.15		.17						T.	.60		.10	.15	.05	.05															2.52		
Irwin.....	Monongahela.....	.02	.27	T.	.06	.04			T.	.52		.11	.04	.05	T.																2.42		
Johnstown.....	Allegheny.....	.07	.12	.03	.13	.01	T.	.03		T.	.02	.46	.05	.14	.16	T.				T.										2.44			
Lock No. 4   .....	Monongahela.....	.07		.96		.03				T.	.24	.35	.16	.08	T.	.05														3.08			
Lycippus.....	Allegheny.....	.39	.04		.09	T.			T.	.70		.25	.17	.12	.01															3.16			
Mosgrove.....	do.....	.25	T.	.15	.03	.02				T.	.30	.20	.03	.97	T.	T.														2.72			
Parkers Landing   .....	Allegheny.....	.03		.32	.01	.22	.02	.01		T.	.01	.22	.12	.01	.30	.14														2.10			
Pittsburgh.....	Ohio.....	.28	T.	.18	T.	T.				T.	.25	.23	T.	.43	.02	.07															2.53		
Ridgway.....	Allegheny.....		.10	.18		.03				T.	.08	.34		.02	.24	.03															2.72		
Saegeertown.....	do.....	.25	.13		.06					T.	.19	.40		.44	.44																3.21		
Saltsburg   .....	do.....	.15		.16	.02	.11	T.	T.		T.	.13	.44	.03	.19	.08	T.														2.38			
Sharon   .....	Ohio.....	.27	.05	.10	T.	T.				T.	.01	.44	T.	.39	T.															2.09			
Somerset.....	Youghiogheny.....	.45	.34		.02					T.	.52			.46	.48																3.05		
Springdale   .....	Allegheny.....	.05		.20	.03	.25				T.	.27	.28	.20	.78	.05	.10														3.26			
Unontown.....	Monongahela.....	.71		.20	.04	T.				T.	.06	.58	.14	.10	.05															3.05			
Warren.....	Allegheny.....	.90	.20	.10	T.					T.	.26			.10																4.17			
West Newton   .....	Youghiogheny.....	.10		.80					T.	.03	.05	.52	.03	.20	.04															3.10			
<i>Maryland.</i>																																	
Deer Park.....	Youghiogheny.....	.31			.09					T.	.07	.39		.58	.50	.20	.05														3.06		
Grantsville.....	do.....	.83			T.	.04				T.	.10	.37		.56	.10	.46															3.02		
Oakland.....	do.....	.08	.14						T.	.15	.41		.62	.30	.14	.05															2.86		
<i>West Virginia.</i>																																	
Bancroft   .....	Great Kanawha.....											.08	.55	.31		.53	.07															2.75	
Beckley.....	do.....											.50																					2.54
Bens Run.....	Ohio.....											.09																					2.82
Bluefield.....	Great Kanawha.....											.30																					2.34
Brandonville   .....	Monongahela.....											.45																					3.38
Buckhannon.....	do.....											.09																					3.09
Cairo.....	Little Kanawha.....	.06										.18																					3.08
Central Station.....	M'dle Is. C'k.....	T.	T.		.05	T.						.06		.21	.76	.08	.27	.05	.18	.12										1.99			
Charleston   .....	Great Kanawha.....											.05		.15	.43		.08	.11	.25	T.										2.52			
Cheat Bridge   .....	Monongahela.....	.16				</td																											

TABLE 2.—*Daily precipitation for April, 1913. District No. 3—Continued.*

TABLE 2.—*Daily precipitation for April, 1913. District No. 3—Continued.*

TABLE 2.—*Daily precipitation for April, 1913. District No. 3—Continued.*

TABLE 2.—*Daily precipitation for April, 1913. District No. 8—Continued.*

Stations.	Watershed.	Day of month.																													Total.		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
North Carolina—Con.																																	
Hot Springs.....	Tennessee.....								T.		.60	.15		.66	.53	.28																	2.98
Jefferson.....	Great Kanawha.....								T.	.15	.12	.22	.66	.62	.39	.11	.33															4.29	
Marshall.....	Tennessee.....								T.	T.	.71	.11	T.	.72	.25	.26																2.68	
Murphy    .....	do.....			.04	.07	.03					.14	.10		.05	.12	T.															0.86		
Rock House.....	Savannah.....										.10	.45	T.	2.00	1.00	.42	.32	.16	.45											5.37			
Transom.....	Great Kanawha.....											.75	.50		.05	.70	.05														2.72		
Waynesville    .....	Tennessee.....																																
Virginia.....																																	
Blacksburg.....	Kanawha.....																																2.82
Burkes Garden.....	Tennessee.....																																2.88
Elk Knob.....	do.....																																1.74
Ivanhoe    .....	Kanawha.....																																3.64
Lebanon.....	Tennessee.....																																2.71
Max Meadows.....	Kanawha.....																																2.99
Mendota    .....	Tennessee.....																																2.76
Mountain Lake.....	Kanawha.....																																3.51
Radford    .....	do.....																																2.37
Speers Ferry    .....	Tennessee.....																																1.68
Wytheville.....	Kanawha.....																																3.13

• Precipitation included in that of the next measurement.

† Separate dates of falls not recorded.

|| Precipitation for the 24 hours ending on the morning when it is measured.

T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—*Maximum and minimum temperatures at selected stations for April, 1913. District No. 8, Ohio Valley.*

Date.	Pennsylvania.				West Virginia.										Ohio.														
	Greenville.		Pittsburgh.		Charleston.		Elkhorn.		Elkins.		Glenville.		Huntington.		Morgantown.		Parkersburg.		Wheeling.		Canton.		Cincinnati.		Columbus.		Dayton.		
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.			
1....	51	32	51	39	62	44	58	43	51	38	60	40	64	43	54	36	57	40	58	.....	53	35	63	43	57	38	57	38	
2....	52	34	49	37	76	38	75	35	57	33	64	30	72	37	50	37	58	40	57	34	62	31	78	45	57	40	69	42	
3....	73	34	75	45	80	55	75	52	80	53	80	44	79	42	77	41	77	47	77	37	71	37	71	51	62	70	51	67	58
4....	70	40	70	44	79	52	72	56	74	46	78	54	73	58	73	50	72	45	78	55	67	55	64	43	64	39	61	38	
5....	48	34	47	37	73	40	70	41	47	34	56	38	56	41	60	36	51	40	54	38	48	32	55	41	52	37	50	37	
6....	38	30	42	30	55	37	52	40	44	30	54	33	54	37	47	32	50	35	55	31	45	29	53	36	49	31	49	31	
7....	37	28	39	30	52	32	55	30	42	26	52	25	54	35	45	27	44	33	47	29	38	27	48	34	46	29	43	29	
8....	49	20	50	29	57	34	54	37	51	20	60	26	58	34	49	24	53	29	56	27	49	26	53	32	50	28	48	28	
9....	56	25	55	36	62	33	55	44	58	30	50	33	55	34	59	30	48	40	58	35	61	30	48	39	45	37	45	37	
10....	53	41	61	47	70	42	66	49	61	44	73	46	70	41	74	44	67	48	70	40	59	38	64	48	58	45	60	45	
11....	60	47	58	47	65	57	68	51	60	49	72	46	69	53	59	50	61	47	59	52	61	44	55	47	58	43	52	44	
12....	57	35	59	44	65	47	64	46	58	44	58	45	63	44	58	44	61	45	64	45	57	37	52	45	54	42	49	43	
13....	55	40	63	47	63	46	62	45	60	44	60	46	53	45	58	47	52	44	56	45	45	40	45	39	43	39	43	39	
14....	60	40	56	45	55	40	50	39	50	41	66	41	51	44	50	43	54	42	58	46	57	41	58	42	55	40	56	40	
15....	66	41	58	48	53	42	53	35	54	41	60	45	57	44	59	45	58	48	60	46	59	40	61	40	58	38	58	36	
16....	63	35	64	46	67	45	68	44	62	42	70	45	70	46	65	45	67	45	71	43	63	37	71	46	66	40	69	42	
17....	69	29	68	42	70	40	69	37	66	31	75	34	73	40	66	36	71	41	74	37	69	34	73	49	69	40	70	41	
18....	77	37	77	52	83	42	79	42	79	31	83	34	84	41	77	41	82	44	82	39	77	45	82	55	76	49	76	53	
19....	58	37	61	38	83	55	78	51	62	37	78	53	68	45	76	50	67	47	64	52	54	41	64	48	59	43	59	43	
20....	45	25	46	30	83	40	67	36	49	30	60	28	58	41	55	27	53	35	58	31	49	25	55	38	51	31	53	33	
21....	60	20	60	30	67	32	67	29	63	21	70	25	66	32	63	26	63	31	66	26	62	22	67	36	61	33	64	33	
22....	78	35	77	44	80	40	76	39	75	29	73	35	81	37	76	38	80	39	83	29	80	28	78	47	76	49	76	49	
23....	84	48	80	62	82	52	80	47	79	46	84	45	85	41	82	61	82	61	88	36	82	52	80	60	80	55	78	59	
24....	85	36	83	54	84	50	81	47	80	39	89	54	84	49	82	49	83	50	88	38	83	43	80	58	80	55	78	59	
25....	84	42	84	54	86	52	80	50	85	43	92	45	86	50	84	50	86	52	90	45	85	46	80	52	82	52	78	50	
Mns.	60.4	35.4	60.9	42.3	69.7	43.6	65.0	42.4	61.2	37.0	68.7	40.1	66.4	42.5	63.2	40.6	63.2	42.9	65.9	39.6	60.3	37.1	63.0	45.0	59.9	40.8	59.6	41.6	

Date.	Ohio.				Indiana.										Kentucky.													
	Marion.		Waverly.		Butler-		Evans-		Indianap-		Kokomo.		Rock-		Worthing-		Philo, Ill.		Beatty-		Bowling		Earling-		Greens-		Lexing-	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.		
1....	58	36	63	37	65	37	64	48	61	39	59	36	67	34	65	36	64	34	78	31	74	38	73	36	70	35	62	40
2....	56	33	70	32	80	40	74	54	78	44	70	41	80	44	80	45	79	45	82	32	84	38	82	44	80	43	78	46
3....	67	42	78	38	75	60	68	59	67	59	67	59	70	60	78	60	69	59	81	42	82	46	79	65	80	59	78	59
4....	63	44	69	57	64	41	60	44	60	40	65	39	63	40	63	42	68	57	73	56	79	59	65	57	64	41	71	59
5....	50	35	55	37	57	35	55	41	54	35	52	32	56	34	58	33	56	32	59	33	62	46	61	33	59	40	52	39
6....	51	29	55	32	56	30	58	47	51	34	50	29	56	29	58	34	53	30	59	31	69	38	70	37	62	41	51	36
7....	45	25	51	29	50	35	52	42	45	32	46	30	49	32	53	35	46	32	62	30	57	37	53	45	61	31	51	36
8....	54	26	54	30	45	33	49	43	47	31	47	28	47	32	46	37	42	33	57	34	58	42	58	43	55	43	62	36
9....	46	36	52	33	45	38	62	49	47	37	46	28	48	39	53	41	49	39	60	45	65	43	67	44	62	39	62	39
10....	56	40	63	38	61	44	59	48	59	47	59	40	60	37	61	51	59	45	71	45	67	54	63	55	67	50	65	54
11....	55	44	64	50	55	40	49	46	48	42	54	40	52	41	52	41	49	40	68	48	62	41	54	42	60	46	58	43
12....	53	39	60	36	47	40	47	41	45	41	44	37	44	38	45	42	45	36	65	40	52	42	57	45	62	42	57	42
13....	53	38	45	38	40	47	40	48	40	50	37	55	38	52	40	50	37	53	42	47	39	45	41	48	41	43	39	43
14....	53	38	55	41	58	40	61	40	59	36	60	31	61	34	62	32	60	34	51	40	52	40	62	42	50	41	51	39
15....	60	36	62	40	62	37	61	41	61	38	65	33	64	37	61	32	60	40	70	40	64	42						

TABLE 3.—*Maximum and minimum temperatures at selected stations for April, 1913. District No. 3—Continued.*

Date.	Kentucky.						Tennessee.										Decatur, Ala. <sup>§§</sup>		Asheville, N. C.		Virginia.							
	Louisville.	Maysville. <sup>§§</sup>	Williamsburg. <sup>§§</sup>	Chatta-nooga.	Johnson City. <sup>§§</sup>	Knoxville.	Nashville.	Palmetto.	Sparta.	Waynes-boro.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.				
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.				
1....	66	45	65	40	68	29	75	50	65	41	70	44	69	45	73	40	80	42	76	38	60	44	58	41	57	42		
2....	80	50	81	36	82	37	80	49	81	36	80	43	81	51	82	52	83	45	81	53	74	38	72	39	73	40		
3....	74	60	79	43	80	48	79	61	82	44	79	65	79	60	80	62	80	63	81	63	81	58	78	42	75	51		
4....	62	42	69	59	70	58	70	52	75	64	71	49	66	45	67	50	75	55	74	52	68	59	75	55	72	47		
5....	56	39	58	40	72	41	60	44	60	42	59	44	60	41	60	37	57	40	60	37	61	41	55	40	53	39		
6....	56	41	56	36	60	38	68	43	56	37	61	39	71	41	72	36	64	34	72	34	77	37	52	39	50	30		
7....	54	40	53	34	67	32	68	45	60	30	66	40	64	46	75	43	65	37	78	42	78	46	65	39	55	33		
8....	49	40	57	33	57	37	70	53	65	33	58	47	68	50	76	52	75	52	76	53	78	56	53	38	51	32		
9....	58	42	55	34	78	44	67	49	66	43	74	46	70	55	73	54	73	53	72	57	76	54	53	37	53	36		
10....	64	52	64	40	70	52	70	56	65	32	72	51	69	53	67	56	67	59	70	54	76	55	54	42	43	40		
11....	52	45	64	50	70	52	67	57	65	40	66	55	62	45	62	46	65	52	61	41	65	47	60	53	60	38		
12....	49	43	60	39	63	41	61	45	69	50	67	46	49	43	57	39	58	42	55	43	41	69	47	54	48	56		
13....	44	42	46	41	54	40	51	43	50	45	52	46	49	41	48	40	49	41	49	39	51	42	53	41	63	50	44	
14....	57	42	54	41	50	38	49	43	44	41	50	42	53	42	50	41	45	41	57	41	56	41	41	33	57	43	47	
15....	61	40	60	41	48	41	57	46	54	38	55	44	63	44	66	38	54	42	64	33	66	43	50	36	55	33	37	
16....	72	47	71	39	52	42	72	51	65	40	71	45	72	48	75	38	70	40	73	35	73	40	61	42	63	36	60	39
17....	76	53	76	33	54	41	79	53	76	41	75	47	80	53	81	43	76	40	80	38	80	43	69	46	69	35	70	40
18....	82	60	85	41	81	39	83	49	82	42	84	46	85	52	85	47	86	40	85	42	85	45	79	40	78	34	76	36
19....	67	50	67	46	79	50	83	56	71	47	72	58	78	60	81	56	78	46	84	48	85	46	73	48	67	45	68	49
20....	59	42	61	38	47	45	73	54	69	40	70	49	71	51	71	47	73	47	74	53	76	55	67	47	60	40	60	39
21....	71	39	74	31	58	39	74	49	73	33	72	42	78	45	79	41	80	45	80	47	86	48	66	38	62	24	62	27
22....	80	57	82	35	55	40	76	52	77	37	76	50	77	58	79	55	81	54	80	56	79	55	74	38	75	32	73	33
23....	79	61	86	51	75	42	77	48	83	43	80	50	77	55	78	54	82	42	78	55	79	50	77	44	80	44	80	51
24....	78	61	86	48	82	43	79	54	85	44	82	50	76	62	80	60	84	57	74	60	81	57	80	44	83	41	81	45
25....	76	48	86	50	81	47	76	54	88	47	82	54	73	49	73	54	80	50	67	50	71	59	76	47	80	42	79	44
26....	57	45	50	49	75	50	60	48	65	48	64	44	62	47	63	46	76	47	64	45	65	48	69	43	72	44	72	43
27....	53	41	58	38	55	47	59	43	53	41	55	39	53	43	59	41	61	40	66	35	68	42	51	39	56	42	52	39
28....	49	42	47	41	50	34	54	42	47	36	48	38	52	39	57	34	49	38	62	32	59	38	45	34	46	40	44	38
29....	68	45	70	41	71	41	72	45	56	36	65	43	73	45	75	47	70	42	75	40	75	43	52	38	58	38	55	38
30....	73	49	75	36	76	38	77	52	76	38	74	43	77	50	78	42	79	41	81	46	72	43	72	34	70	38	70	38
Mns..	64.1	46.8	66.5	40.8	66.0	42.2	69.5	49.5	67.4	41.0	68.3	46.6	68.5	48.7	70.7	46.4	70.4	45.6	71.6	45.2	72.2	47.3	63.2	42.4	63.2	38.7	62.1	40.5

<sup>a</sup>, <sup>b</sup>, <sup>c</sup>, etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.

<sup>§§</sup> Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.